

IN THE CLAIMS

1. (Canceled)
2. (Currently Amended) A thermal transfer interface, comprising:
a thermal spreader forming a plurality of passageways;
a spring element coupled with the spreader; and
a plurality of thermally conductive pins for the passageways, each of the pins having a head and a shaft moving with the spring element, at least part of the shaft being internal to the passageway and forming a gap with an internal surface of the passageway, wherein the pin heads collectively and macroscopically conform to an object coupled thereto to transfer heat from the object to the spreader through the passageway gap formed between the spreader and each of the plurality of pins, wherein the spring element forms a layer with a substantially planar face, a flat front surface of each of the pin heads being substantially flush with the face.
- 3-4. (Cancelled)
5. (Previously Presented) An interface of claims 2 or 12, the spreader comprising a ventilated metal block.
- 6-9. (Cancelled).
10. (Previously Presented) An interface of claims 2 or 12, the thermal spreader comprising at least one vent coupled with at least one of the passageways, to vent pressure from the one passageway.
11. (Previously Presented) An interface of claim 2 or 12, one or more of the pin shafts having non-cylindrical shape, each of the passageways having a substantially matched non-cylindrical shape to accommodate motion of the shafts therethrough.
12. (Currently Amended) A thermal transfer interface , comprising:

a thermal spreader forming a plurality of passageways;
a spring element coupled with the spreader; and
a plurality of thermally conductive pins for the passageways, each of the pins having a head and a shaft moving with the spring element, at least part of the shaft being internal to the passageway and forming a gap with an internal surface of the passageway, wherein the pin heads collectively and macroscopically conform to an object coupled thereto to transfer heat from the object to the spreader through the passageway gap formed between the spreader and each of the plurality of pins, the pin heads arranged in a geometric pattern that covers an area extending beyond a region of contact between the pin heads and the object such that one or more of the pinheads outside the region of contact are non-contacting with the object.

13-17. (Cancelled)

18. (Currently Amended) A method for transferring thermal energy from an object to a heat sink, comprising the steps of:

biasing a plurality of pins against a surface of the object so that the plurality of pins contact with, and substantially conform to, a macroscopic surface of the object, and

communicating thermal energy from the object through the pins to a thermal spreader forming a plurality of gaps with the plurality of pins, the step of biasing comprising utilizing a spring element formed of thermally conductive material with a substantially planar face, a flat front surface of each of the pin heads being substantially flush with the face.

19-20. (Cancelled).

21. (Previously Presented) A method of claim 18, further comprising utilizing a thermal spreader having at least one vent coupled with at least one passageway through the thermal spreader, to vent pressure from the passageway.

22. (Cancelled)

23. (Previously Presented) A method of claim 18, further comprising the step of disposing thermal grease within the gap.

24. (Previously Presented) A method of claim 18, the object comprising a semiconductor die.

25. (Cancelled).

26. (New) An interface of claim 5, the ventilated metal block configured for venting overpressurization of thermally conductive material.

27. (New) An interface of claim 26, thermally conductive material comprising one or more of thermally conductive grease, gas, air or other thermally conductive medium.

28. (New) A method of claim 21, wherein venting pressure from the passageway comprises venting overpressurization from a thermally conductive material in the passageway.

29. (New) A method of claim 28, wherein venting overpressurization from a thermally conductive material in the passageway comprises venting one or more of thermally conductive grease, gas, air or other thermally conductive medium.